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REMARKS

Favorable reconsideration of this application is requested in view of the above amendments and the following remarks.

The abstract has been rewritten to comply with the 150 word limit of MPEP § 608.01(b).

Claim 1 is amended. Claims 7, 9, 11, and 14 are cancelled without prejudice. Claims 15-19 are withdrawn without prejudice as reflected in the previous election of Group I (claims 1-14) with traverse. Claims 1-6, 8, 10, 12 and 13 are pending.

I. Claim amendment

Claim 1 was amended to incorporate concentration ranges on components (b) through (e).

Support for "(b) tin salt or tin oxide wherein the concentration of the tin salt or tin oxide in terms of the concentration of tin is in a range of 0.1 to 5 mass %;" may be found in cancelled claim 7, as well as the specification.

Support for "(c) salt or oxide of at least one type of metal selected from the group consisting of: silver, zinc, aluminum, titanium, bismuth, chromium, iron, cobalt, nickel, palladium, gold, and platinum wherein the concentration of the salt or oxide of the at least one type of metal in terms of the concentration of metal is 0.5 to 10 mass %;" may be found in cancelled claim 9, as well as the specification.

Support for "(d) a reaction accelerator wherein the concentration of the reaction accelerator is in a range of 5 to 40 mass %;" may be found in cancelled claim 11, as well as the specification.

Support for "(e) a diffusive retaining solvent wherein the concentration of the diffusive retaining solvent is in a range of 5 to 60 mass %;" may be found in cancelled claim 14, as well as the specification.

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II. 35 U.S.C. 102 rejections

1. Claims 1, 3-5, 7, and 9-11 are rejected under 35 U.S.C. 102 (a and e) as being anticipated by Tsuji (US 6,607,653). Applicants respectfully traverse this rejection. Claim 1 includes the limitations set forth in 14 and therefore the rejection is moot. Applicants do not concede the correctness of the rejection.

2. Claims 1, 3, 5-7, 9, 11, and 12-14 are rejected under 35 U.S.C. 102 (a and e) as being anticipated by Obata et al. (USPA 2003/0150743) (" '743"). Applicants respectfully traverse this rejection. Claim 1 includes "(d) a reaction accelerator wherein the concentration of the reaction accelerator is in a range of 5 to 40 mass %," which '743 does not teach nor disclose. The level of EDTA cited in Example 9 of the '743 reference is 4.5 grams/liter, or approximately 0.45%, which is not nearly sufficient to provide the beneficial properties of the present composition.

Furthermore, '743, discloses a composition for a tin-based plating bath which is not intended to form a copper-to-resin bonding layer. Therefore, there would be no reason for using a reaction accelerator in the amount required by claim 1.

Claims 3, 5, 6, 12, and 13 all depend from 1 and overcome the reference. Applicant, however, reserves the right to submit additional arguments as to any of claims 3, 5, 6, 12, and 13 at a later date.

3. Claims 1, 3, 5-9, 11, and 14 are rejected under 35 U.S.C. 102 (b) as being anticipated by Relis (EP 0 278 752) (" '752"). Applicants respectfully traverse this rejection. Claim 1 includes "(d) a reaction accelerator wherein the concentration of the reaction accelerator is in a range of 5 to 40 mass %," which '752 does not teach nor disclose.

The '752 reference relates to a tin-based plating bath for coating assembled bearings made of both aluminum-based and iron-based alloys with tin plating, and the solution used for the plating bath is not intended to be brought into contact with a copper surface. Thus, this solution is completely different from the bonding layer forming

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solution according to the present invention whose purpose is specifically to be brought into contact with a copper surface so as to form a copper-to-resin bonding layer.

Furthermore, the '752 reference does not disclose a reaction accelerator as disclosed in claim 1 of the present application. The '752 reference lists urea in three of their recipes, yet fails to teach or suggest what its purpose is. Furthermore, even if urea was a reaction accelerator, which applicants do not concede, the '752 reference uses such a low concentration (20 grams per liter (approximately 2 mass %) in example 7, for instance) that the formation of the bonding layer of the present application would be precluded.

Lastly, the examiner's statement that water, used in '752, may be used as the applicants' claimed [diffusive retaining] solvent. The preamble to claim 1 states "[a]n *aqueous* solution for forming a copper-to-resin bonding layer, comprising." To imply that the specified "diffusive retaining solvent" element of the claim is merely water is to imply that this claim element does not exist. This possible construction of the claim produces an unreasonable result, and as such, is not a reasonable interpretation of the claim.

Furthermore, the present application, ¶ 32 page 2, states:

In this specification, a diffusive retaining solvent refers to a solvent that facilitates the maintenance of the concentration of a reactive component required for the formation of a bonding layer for bonding resin in the vicinity of a copper surface. Examples of a diffusive retaining solvent include glycols such as ethylene glycol, diethylene glycol, propylene glycol and the like, and glycol esters such as cellosolve, carbitol, butyl carbitol and the like.

Water does not satisfy the definition of "diffusive retaining solvent" as herein presented. Examiner has not shown that water as used in the context of the '752 reference falls within the above ranges. The solution of cited example 7 contains water in amounts too high for it to be an effective diffusive retaining solvent as required by claim 1.

Claims 3, 5, 6, and 8 all depend from 1 and overcome the reference. Applicant, however, reserves the right to submit additional arguments as to any of claims 3, 5, 6, and 8 at a later date.

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4. Claims 1- 5, 7, 9-11, and 14 are rejected under 35 U.S.C. 102 (b) as being anticipated by Bokisa et al. (US 6,361,823). Applicants respectfully traverse this rejection to the extent it is maintained. Claim 1 includes "(d) a reaction accelerator wherein the concentration of the reaction accelerator is in a range of 5 to 40 mass %," which '823 does not teach nor disclose.

Furthermore, '823 relates to a method of plating a copper surface with tin whose purpose is to suppress the formation of tin whiskers. The disclosed method of '823 requires two steps. First, a plating layer is formed using a solution containing tin alone. In a second process, a metal layer is later formed using a solution containing tin and other metals, as stated in the abstract and claim 1, to "form an alloy cap layer on the tin coating." According to this method, the solution containing tin and other metals is brought into contact with only the tin layer – it does not contact the copper surface. In contrast, the solution according to the present invention is brought into direct contact with a copper surface so as to form a layer having adhesion to resin on the copper surface, and is therefore completely different than the invention described in '823.

Lastly, examiner's statement that water, used in '823, may be used as the applicants' claimed diffusive retaining solvent. The preamble to claim 1 states "[a]n aqueous solution for forming a copper-to-resin bonding layer, comprising." To imply that the specified "diffusive retaining solvent" element of the claim is merely water is to imply that this claim element does not exist. This possible construction of the claim produces an unreasonable result, and as such, is not a reasonable interpretation of the claim.

Claims 2- 5, and 10 all depend from 1 and overcome the reference. Applicant, however, reserves the right to submit additional arguments as to any of claims 2- 5, and 10 at a later date.

Favorable consideration and withdrawal of the rejections are respectfully requested.

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V. Conclusion

In view of the above, early issuance of a notice of allowance is solicited. Any questions regarding this communication can be directed to the undersigned attorney,



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Respectfully submitted,

HAMRE, SCHUMANN, MUELLER &
LARSON, P.C.
P.O. Box 2902-0902
Minneapolis, MN 55402-0902
(612) 455-3800

By: 

Douglas P. Mueller
Reg. No. 30,300
DPM/jll